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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/907,250	07/17/2001	Yung Yi Chang	B-4248 618947-0	5651

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/907,250

Applicant(s)

CHANG, YUNG YI

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 6-8 is/are allowed.
- 6) ☒ Claim(s) 5 and 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This Application has been examined. The claims 1-3 and 5-14 are pending. The examination results are as following.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Applicant's admission (Japanese Lai Open Application 11-281957 of figures 1-4) in view of Su et al. (US 6,590,555).

Regarding claim 5, figure 2 of Prior Art discloses a device for eliminating the flickering of thin-film-transistor liquid-crystal-display (TFT-LCD), the device comprising a first switch (SW1), configured between a power supply and an output end of the device, a discharge circuit, with one end connected between the first switch and the output end of the device and the other end connected to the ground, a second switch for controlling discharge circuit grounding; a trigger signal source for controlling the switches, wherein the first switch is on and the second switch is off, a output end of the device is connected to the power supply and the circuit is recharged, and when the first switch is off and the second switch is on, the discharge circuit is grounded and discharged. However, figure 2 of prior art does not disclose means for delaying opening of the second switch at lower temperature, the means disposed in the discharge circuit. Su et al. disclose a control

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circuit for LCD having delaying opening of the switch at lower temperature (see driving circuit includes a switch and temperature sensor and driving mode is used at low temperature, see column 4, lines 26-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the using of the switch at lower temperature as taught by Su et al. into the system of prior art as discussed above because this would for providing the improving the display frame.

Regarding claims 9 and 14 figure 2 of Prior Art discloses a device for eliminating the flickering of thin-film-transistor liquid-crystal-display (TFT-LCD), the device comprising a first transistor or first switch (SW1), configured between a power supply and an output end of the device, a discharge circuit, with one end connected between the first transistor or first switch (because in the specification of this application discloses the TFT is a switch) and the output end of the device and the other end connected to the ground, a second transistor or second switch (SW2) for controlling discharge circuit grounding; a trigger signal source for controlling the switches, wherein the first transistor or switch is on and the second transistor or switch is off, a output end of the device is connected to the power supply and the circuit is recharged, and when the first transistor or switch is off and the second transistor or switch is on, the discharge circuit is grounded and discharged. However, figure 2 of prior art does not disclose means for delaying opening of the second transistor or switch at lower temperature, the means disposed in the discharge circuit. Su et al. disclose a control circuit for LCD having delaying opening of the switch that maybe transistor at lower temperature (see driving circuit includes a switch and temperature sensor and driving mode is used at low temperature, see column

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4, lines 26-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the using of the switch at lower temperature as taught by Su et al. into the system of prior art as discussed above because this would for providing the improving the display frame.

Regarding claim 10, figure 2 of prior art discloses wherein the discharge circuit comprises a resistor and a capacitor.

Regarding claim 11, figure 2 of prior art discloses wherein the means for delaying opening of the second transistor is disposed in the discharge.

Regarding claim 12, figure 2 of prior art discloses wherein the for delaying opening of the second transistor is configured between the trigger signal source and the first transistor.

Rgarding claim 13, figure 2 of prior art discloses wherein the means for delaying opening of the second transistor is configured between the trigger signal source and the second transistor.

***Allowable Subject Matter***

3. Claims 1-3, and 6-8 are allowed.

The following is an examiner's statement of reasons for allowance: The present invention is directed to a device for eliminating the flickering of thin-film-transistor liquid-crystal-display (TFT-LCD), the device comprising a first switch, a second switch, a discharge circuit, a trigger signal source for controlling the switches, wherein the first switch is on and the second switch is off, a output end of the device is connected to the power supply and the circuit is recharged, and when the first switch is off and the second switch is on, the discharge circuit is grounded and

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discharged. The combination of closest prior art, of figures 1-4, wood et al. (5,926,162), Su et al. (US 6,590,555), Akiyama (US 6,278,426) show a similar to a device of thin-film-transistor liquid-crystal-display (TFT-LCD), the device comprising a first switch, a second switch, a discharge circuit, a trigger signal source for controlling the switches, wherein the first switch is on and the second switch is off, a output end of the device is connected to the power supply and the circuit is recharged, and when the first switch is off and the second switch is on, the discharge circuit is grounded and discharged and having a change of temperature. However, they fail to teach a means for delaying opening of the second switch at lower temperatures, wherein the means is a component or circuit with a negative temperature coefficient as claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D. C. 20231

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**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only).**

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,  
Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose telephone  
number is (703) 306-0377.

Kimnhung Nguyen  
August 25, 2004

  
RICHARD HJERPE 9/2/04  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600